

REMARKS

Claim 1 has been amended. Claims 6 through 20 have been withdrawn from further consideration. Claims 1 through 20 remain in the application. A marked up copy of the amended claim is attached hereto as Appendix A.

Claims 1 through 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Asano et al. (U.S. Patent No. 5,078,207). Applicants respectfully traverse this rejection.

U.S. Patent No. 5,078,207 to Asano et al. discloses a heat exchanger and fin for the same. The conventional type offset fin (L-S) shown in FIG. 10 is formed by a cutting device including a plurality of cutters. Since the slit 7 and 8 is formed as the square hole 22 on the thin plate 21, the slit 7 and 8 is precisely formed between the first horizontal wall portion 5 and the second horizontal wall portion 6. Therefore, no remaining portion is existed on the first vertical wall portion 3 and the second vertical wall portion 4. Accordingly, the boundary-layer flow is broken by the slits 7 and 8, so that the local coefficient of heat transfer (Nu) can maintain high volume. The width S of the slit 7 and 8 is preferred to be smaller than the length L of the fin.

① Asano et al. does not disclose a plurality of corrugated fins each having a base extending laterally and longitudinally in a strip and a connecting member interconnecting the base and another one of the corrugated fins with the connecting member having a longitudinal length greater than a lateral width thereof.

In contradistinction, claim 1, as amended, clarifies the invention claimed as a turbulator with offset louvers for a heat exchanger including a plurality of corrugated fins each having a base extending laterally and longitudinally in a strip and a connecting member interconnecting the base and another one of the corrugated fins. The connecting member has a longitudinal length greater than a lateral width thereof. The turbulator also includes a plurality of offset louvers spaced along the base and extending longitudinally and generally perpendicular to

the base in an alternating manner. The offset louvers are rolled in a direction parallel to a longitudinal axis of the strip.

A rejection grounded on anticipation under 35 U.S.C. § 102 is proper only where the subject matter claimed is identically disclosed or described in a reference. In other words, anticipation requires the presence of a single prior art reference which discloses each and every element of the claimed invention arranged as in the claim. In re Arkley, 455 F.2d 586, 172 U.S.P.Q. 524 (C.C.P.A. 1972); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983); Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 U.S.P.Q. 481 (Fed. Cir. 1984).

① Asano et al. '207 does not disclose or anticipate the claimed invention of claim 1. Asano et al. '207 merely discloses a heat exchanger and fin for the same having a slit formed between a first horizontal wall portion and a second horizontal wall portion. Asano et al. '207^② lacks a plurality of corrugated fins each having a base extending laterally and longitudinally in a strip and a connecting member interconnecting the base and another one of the corrugated fins with the connecting member having a longitudinal length greater than a lateral width thereof. In Asano et al. '207, the lateral width P is greater than a longitudinal length S and not visa versa. Asano et al. '207 fails to disclose the combination of a turbulator with offset louvers including a plurality of corrugated fins each having a base extending laterally and longitudinally in a strip and a connecting member interconnecting the base and another one of the corrugated fins with the connecting member having a longitudinal length greater than a lateral width thereof as claimed by Applicants. Therefore, it is respectfully submitted that claim 1 and the claims dependant therefrom are allowable over the rejection under 35 U.S.C. § 102(b).

Based on the above, it is respectfully submitted that the claims are in a condition for allowance, which allowance is solicited.

Respectfully submitted,

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APPENDIX A**VERSION OF THE CLAIM WITH MARKINGS TO SHOW THE CHANGES**

Please amend claim 1 as follows:

1. (AMENDED) A turbulator with offset louvers for a heat exchanger comprising:

a plurality of corrugated fins each having a base extending laterally and longitudinally in a strip and a connecting member interconnecting said base and another one of said corrugated fins, said connecting member having a longitudinal length greater than a lateral width thereof; and

a plurality of offset louvers spaced along said base and extending longitudinally and generally perpendicular to said base in an alternating manner, said offset louvers being rolled in a direction parallel to a longitudinal axis of said strip.